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*B. C. H.*  
Attorney for Applicant(s)

PATENT APPLICATION

Docket No.: 1053.2.2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Mark J. Hagmann

Serial No.: Not yet assigned

10/625380

Filing Date: July 23, 2003

For: APPARATUS, METHOD AND SYSTEM FOR A  
LASER-ASSISTED FIELD EMISSION MICROWAVE  
SIGNAL GENERATOR

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) Unit:  
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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement discloses information which has come to the attention of applicant and his attorneys and is being submitted so as to comply with the duty of disclosure set forth in 37 C.F.R. § 1.56. In accordance with 37 C.F.R. § 1.97(b), this Statement is being filed within three (3) months of the filing date of the above-identified application or before the mailing date of a first Action on the merits.

Neither applicant nor his attorneys make any representation that any information disclosed herein may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103. Moreover, pursuant to 37 C.F.R. § 1.97, the filing of this Information Disclosure Statement shall not be construed

as a representation that a search has been made or as an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

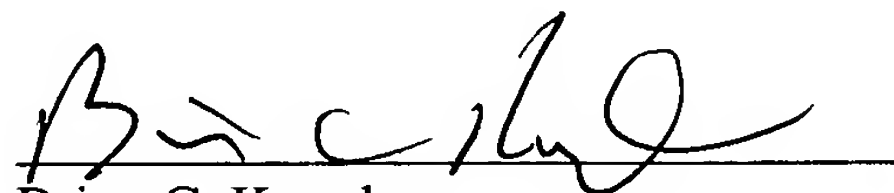
In accordance with 37 C.F.R. § 1.98, this Information Disclosure Statement includes and is accompanied by:

1. A completed copy of Form PTO-1449 listing the patents, publications and other information being submitted for consideration; and
2. A legible copy of each patent, publication and other item of information in written form listed on the enclosed Form PTO-1449.

#### NON-ENGLISH INFORMATION

Pursuant to 37 C.F.R. § 1.98, following is a concise explanation of the relevance (as it is presently understood by the individual designated in 37 C.F.R. § 1.56(c) most knowledgeable about the content of the information), of each listed patent, publication or other information that is not in the English language.

Respectfully submitted,



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<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (use several sheets if necessary)	<b>SERIAL NO.</b> Not yet assigned	<b>ATTORNEY DOCKET NO.</b> 1053.2.2
	<b>FILING DATE</b> July 23, 2003	<b>GROUP ART UNIT</b>
	<b>APPLICANT(S):</b> Mark J. Hagmann	

**REFERENCE DESIGNATION****U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION	
						YES	NO

**NON-PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)
	A1	Peter H. Siegel, Fellow, IEEE "Terahertz Technology", IEEE Transactions on Microwave Theory and Techniques, Vol. 50, NO. 3 March 2002; pg 910-928
	A2	E.R. Brown, F. W. Smith and K.A. McIntosh "Coherent Millimeter-wave Generation by Heterodyne Conversion in Low-temperature-grown GaAs Photoconductors", J. Appl. Phys. 73 (3), 1 February 1993; pg 1480-1463
	A3	Mark J. Hagmann "Stable and Efficient Numerical Method for Solving the Schrodinger Equation to Determine the Response of Tunneling Electrons to a Laser Pulse", International Journal of Quantum Chemistry, Vol. 70, pg. 703-710 (1998) no. 4/5
	A4	L. Arnold and W. Krieger, H. Walter "Laser-frequency mixing using the scanning tunneling microscope", J. Vac Sci. Technol. A 6 (2), Mar/Apr 1988; pg 466-469

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).



	A5	Mark J. Hagmann "Simulations of photon-assisted field emission: their significance in basic science and device applications", Ultramicroscopy 79 (1999); pg. 115-124
	A6	Mark J. Hagmann "Simulations of the generation of broadband signals from DC to 100 THz by photomizing in laser-assisted field emission", Ultramicroscopy 73 (1998); pg. 89-97
	A7	S.K. Masalmeh, H.K.E. Stadermann, J. Korving "Mixing and rectification properties of MIM diodes", Physica B 218 (1996); pg. 56-59
	A8	Mark J. Hagmann "Stimulations of Laser-Assisted field Emission Within the Local Density Approximation of Kohn-Sham Density-Functional Theory", International Journal of Quantum Chemistry, Vol. 65, No. 5, pg. 857-865 (1997)
	A9	Mark J. Hagmann "Single-Photon and Multiphoton Processes Causing Resonance in the Transmission of Electrons by a Single Potential Barrier in a Radiation Field", International Journal of Quantum Chemistry, Vol. 75 No. 4/5, pg 417-427 (1999)
	A10	Mark J. Hagmann "Mechanism for Resonance in the Interaction of Tunneling Particles with Modulation Quanta", J. Appl. Phys. 78 (1), 1 July 1995; pg. 25-29
	A11	Alexandre Mayer and Jean-Pol Vigneron "Quantum-Mechanical Simulations of Photon-stimulated field emission by Transfer Matrices and Green's functions", Physical Review B, Vol. 62, No. 15 Dec. 2000-1; pg. 16 138- 16 145
	A12	Mayer, N. M. Miskovsky, and P.H. Cutler "Photon-stimulated field Emission from Semiconducting (10, 0) and Metallic (5, 5) carbon Nanotubes", Physical Review B, Vol. 65, 195416; pg. 195416-1 - 195416-6
	A13	A. Mayer, N. M. Miskovsky and P.H. Cutler "Three-dimensional Simulations of Field Emission through an Oscillating Barrier from a (10,0) Carbon Nanotube", J. Vac. Sci. Technol. B 21(1), Jan/Feb 2003; pg. 395-399
	A14	Georg Goubau "Surface Waves and Their Application to Transmission Lines", Journal of Applied Physics, Vol. 21 Nov. 1950; pg 1119-1128
	A15	Karen N. Kocharyan, Mohammed Nurul Afsar, and Igor I. Tkachov "Millimeter-Wave Magnetooptics: New Method for characterization of Ferrites in the Millimeter-Wave Range", IEEE Transactions on Microwave theory and tech., Vol. 47, No. 12 Dec. 1999; pg. 2636-2643
	A16	W. Zhu, C. Bower and O. Zhou, and G. Kochanski and S Jin "Large Current Density from Carbon Nanotue Field Emitters", Applied Physics Letters, Vol. 75, No. 6, 9 Aug. 1999; pg. 873-875
	A17	R. Tarkiainen, M. Ahlskog, J. Penttila, L. Roschier, P. Hakonen, M. Paalanen, and E. Sonin "Multiwalled Carbon Nanotube: Luttinger Versus Fermi Liquid", Physical Review B, Vol. 64, 195412, pg. 195412-1 - 195412-4

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	A18	Markus Ahlskog, Pertti Hakonen, Mikko Paalanen, Leif Roschier, and Reeta Tarkiainen "Multiwalled Carbon Nanotubes as Building Blocks in Nanoelectronics", Journal of Low Temperature Physics, Vol. 124, Nos. 1 /2, 2001; pg. 335-352
	A19	A. Bachtold, M. de Jonge, K. Grove-Rasmussen, and P.L. McEuen "Suppression of Tunneling into Multiwall Carbon Nanotubes", Physical Review Letters, Vol. 87, No. 16 15 Oct. 2001; pg. 166801-1 - 166801-4
	A20	P.J. Burke "An RF Circuit Model for Carbon Nanotubes", IEEE Transactions on Nanotechnology, Vol. 2, No. 1 March 2003; pg. 55-58
	A21	D. B. Rutledge, S. E. Schwarz and A. T. Adams "Infrared and Submillimetre Antennas", Infrared Physics 18 Dec. 1978; pg. 713-729

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